mr. Clintock (gon)

ANNUAL LECTURE.

INTRODUCTORY LECTURE

DELIVERED IN THE

CASTLETON MEDICAL COLLEGE,

MAROH 8, 1849.

BY JAMES McCLINTOCK, M. D.,

PROFESSOR OF GENERAL, SPECIAL AND SURGICAL ANATOMY.

PUBLISHED BY THE CLASS.

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CASTLETON, VT.

ROBINSON & SOUTHMAND, PRINTERS.

1842.

Prof. JAMES McCLINTOCK:

DEAR SIR,—At a meeting of the Students of the Castleton Medical College, Mr. Z. W. Joslin, of N. Y. was called to the Chair, and Mr. Samuel Galentin, of N. Y. appointed Secretary; and the following resolution was unanimously adopted:

Resolved,—That a Committee of five be appointed to request of Prof. James McCliutoek a copy of his Introductory Lecture, to the Course of this Spring, for publication.

In behalf of the Class, the Committee beg leave to present the above request.

Respectfully Yours,

CHARLES WARREN, N. H. 11. JUDSON SQUIRE, N. Y. LEWIS F. TITUS, N. Y. SAMUEL GALENTIN, N. Y. GEORGE F. NEWELL, L. C.

CASTLETON, March 21, 1842.

GENTLEMEN, -- Your communication of the 19th inst. requesting, in behalf of the Students of Castleton Medical College, a copy of my late Introductory Lecture for publication, was duly received.

As it is my determination to comply, as far as I possibly can, with every wish of the Class, I herewith furnish you a copy of the Address.

Accept for yourselves, Gentlemen, and the Class you represent, the best wishes of

Your Friend,

JAMES McCLINTOCK.

Messrs. Warnen, Squire, Titus, Galentin and Newell.

GENTLEMEN:

It is my duty to deliver to you the General Introductory to the Course of Medical Lectures in this College. I cheerfully embrace the opportunity to give you a cordial welcome to our Halls, and to express the hope, that in your connection with this Institution, all your anticipations will be more than realized. I shall also, before entering upon the principal topic of my discourse, offer you a few remarks upon the present condition of the School to which you have attached yourselves.

At the late Session of the General Assembly of Vermont, our Board of Trustees presented a petition requesting the alteration of the title of our Institution, from the "Vermont Academy of Medicine" to the "Castleton Medical College." It was believed that the latter title would comport more strictly with the character of the School, and that a change in this respect would be beneficial. The Legislature passed the necessary law, and our title is altered accordingly.

Since our last Session important alterations have occurred in the organization of the Faculty. The first of these changes was occasioned by the resignation, on the part of our highly respected colleague, Horace Green, M. D. of the Chair of Theory and Practice of Medicine. I am happy to announce to you that the Trustees have succeeded in procuring the services of Dr. DAVID M. REESE, of New York, as successor of Dr. Green .-Dr. Reese is no doubt known to most of you as a distinguished member of the profession; and, in addition to his well deserved general reputation, we have the fullest assurance, in the success which attended his late lectures upon the same branches in the Albany Medical College, that the responsible duties of his Chair will be ably performed. In consequence of Dr. Hadley's removal to Geneva and engagements there during our Lecture Term, he found it impossible to attend to the duties of his Professorship in this Institution, and therefore tendered his resignation. The vacant Chair has been filled by the election of William Matu-ER, M. D. a pupil of our much esteemed late colleague. Dr. Mather has been for twelve years engaged in lecturing on the branches which it will be his province here to teach; so that your Professor will not come before you as a novice in his business, but with the advantage of that thorough acquaintance with his subject and the best modes of teaching it, which nothing but long study and experience can impart. A distinct Professorship of Medical Jurisprudence has been created since we last met you, and Dr. W. P. RUSSEL, of Middlebury, formerly Professor

of the same branch in Vermont Medical College, has been called to fill the Chair. This important department of Science, heretofore too much neglected by Medical Students, will now receive the full attention of an able teacher in our College; and we have no doubt that you will second the liberal views of the Corporation evinced in the creation of the Chair, by your improvement of the opportunities which it will afford you. The duties of Professor MITCHELL's Chair have been much increased, by the addition of the departments of Physiology and Operative Obstetries, to both of which he has given his special study and attention. The members of the Class of last Spring need not be told of the industry and talents which he devotes to the business of instruction; but to those of you who are here for the first time, I may present the assurance that his teachings will be found unusually perspicuous and instructive. Some slight changes that have been introduced in regard to the duties of the other Chairs, will be alluded to in the progress of my remarks.

Since the last Session great improvements have been made in our College Edifices and Museum. The Leeture Rooms have been entirely remodelled, and are now, in point of comfort and convenience, not inferior to any with which we are acquainted. It has been found necessary to fit up a commodious room for the collection of specimens in Materia Medica and Mineralogy, and another for the reception of Anatomieal preparations, on account of the great increase of our specimens in these departments. I have no hesitation in saying, that our Anatomieal Museum is behind very few collections of the kind in this country, in regard to the number and value of the preparations which it contains.— In the last Annual Announcement of this College, it was stated that its Museum contained a certain number of specimens of different kinds. That statement is now reiterated, notwithstanding the gratuitous insinuation of one of the Professors in a neighboring Medical School, made, as I am informed, in his Introductory Leeture at the opening of the last term, that it was an exaggeration. You are here, Gentlemen, and can judge for yourselves, at whose door the charge of falsehood ought to lie.

With this brief exposition of the present condition of our College, I now proceed to the subject chosen for the body of this address. It would certainly be a more easy and grateful task for me to direct your attention to some topic connected with that department of Science which it is my duty and pleasure to teach, but as this discourse is designed to be a General Introductory to the Courses of Consecutive Lectures on the various branches of our professional study, I shall offer you a few remarks upon the more extended subject of Medical Education. To treat this great topic at large would require a much longer time than is allotted to me on the present occasion; I shall, therefore, be under the necessity of confining my observations to the strictly

professional part of a Medical Education, which you will find to include the various branches of Science taught in this Institution.

The Art of Healing is of ancient date. From the earliest ages men have sought to alleviate the pain of disease, and to ward off the stroke of death. In primitive times, rude as the art was, it assumed so high a dignity as to be associated with religion; the Priests were the first Physicians. And although a tolerably rational system of practice was created by Hippocrates two thousand years ago, it is certain that up to a comparatively late period, even among civilized nations, to possess skill in the use of remedies was to secure the reputation, whether for good or evil, of mastering inexplicable powers, or of communing with the mysterious beings of another world. The Science of Medicine is of later growth. The great Greek whom I have named, did, it is true, establish the fundamental principle of making observation the only rule in the treatment of disease; and since his time, in the course of centuries, there have been, as in all other branches of human knowledge, great men who have observed closely, thought profoundly, and by single discoveries assisted in preparing the way for the true developement of the Science; but it is only within a very limited period, that the Newtonian principle of "arguing from phenomena without feigning hypotheses" has been applied to this most important department of Science. "Unfortunately for us," says Dr. Godman, "the perfection of our Science is neither in proportion to its age nor to the revolutions it has undergone. Yet this liability to change, both in doctrines and practice, is rapidly diminishing, as the diffusion of knowledge is promoted and extended by a more correct study of Nature. The charge of being a conjectural Art, must, at no distant period cease to be applicable, and the resources of our Science know neither limit or circumscription, if all who engage in its cultivation be properly zealous in their exertions and true to the trusts they assume." There are at this day, Gentlemen, in our profession, many men who are thus true to the high trusts which they assumed on entering it. Through their labors the stock of medical truths is daily increasing, and that, too, by the application of the only legitimate mode of enlarging the boundaries of our Science, an extensive induction of facts, the results of patient observation. And I have made these remarks, in order to impress upon your minds, now, on the threshold of your studies, that the very basis of your Medical Education, is to be laid in the doctrine that our Science is an assemblage of facts ascertained by observation. These may be combined into systems, or, for the sake of clearness and method,-generalized under some form of theory, but all speculation beyond these limits is "less than nothing and vanity." Men may theorise elsewhere, but here they must not; the day for Medical hypotheses is over. The reproach of uncertainty has been deserved long enough;

we must wipe it out by giving to our Art the only certainty of which it is susceptible, founded upon close and accurate investigation. Divest yourselves, then, in the beginning of all prepossession; swear in the words of no master; adopt the dogmas of no sect; attach yourselves to no exclusive system. Devote yourselves to the study, not of opinions, but of facts, not of schools, but of nature. It were bad enough to lose time by misdirecting your efforts; but worse, inconceivably, would it be, to lay the corner stone of your education in prejudice.

Whatever you may have heard of the fame of distinguished men, and how far soever you may be inclined to reverence their names, and to honor their achievments, beware of being led by any name to the adoption of a mere theory. I would not detract from the reputation of the great masters of science, rather is it our duty to cherish their memory with religious care, and regarding them as benefactors of mankind, to embalm their memories in perpetual praise, but yet we are bound to follow them so far as they followed nature, and no further. If Hoffman enlarged the boundaries of science by the discovery of new facts, we avail ourselves of his labors with thaukfulness, but we do not thereby incur the obligation to adopt his hypotheses. len imparted accuracy to our views of certain forms of disease, we must use the light thus afforded us, without following him in the twilight gloom of his speculations. If Brown infused into medical investigations a scientific spirit, we shall try to labor in that spirit, but not to make proselytes to his theories. If Broussias brought the vigor of a commanding intellect to bear upon some of the most difficult questions in medicine, we can employ the results of his scientific labors without imitating his dogmatism or being called by his name. In a word, gentlemen, we should be men of no sect, but men of science.

The assemblage of truths constituting the science of Medicine is classed in the curriculum of studies in this College, under the following heads, viz: Anatomy, General, Special and Surgical; Physiology and Pathology; Chemistry and Pharmacy; Materia Medica, Therapeutics and Obstetries; Principles and Practice of Surgery; Theory and Practice of Medicine; Opthalmology and Medical Jurisprudence. A formidable list truly. And when I tell you, in addition to all this, as I may without vagueness or exaggeration, that the well disciplined Physician ought to make the whole range of the Natural Sciences contribute to his skill, and should also be thoroughly versed in the knowledge of Psychology, which attempts to explain the workings of man's spiritual nature; or, at least, to classify the phenomena of mind, you will believe that the Profession which you have chosen is to be no playground, and that the training which shall fit you for it must be laborious and long continued. But I must confine myself, as I have said, to the enumerated branches of a strictly

professional education, which I shall now take up in order, -explaining the province of each of the several departments, -setting forth, briefly, their importance in your course of study, - and exhibiting the manner in which they are taught in this College.

The first department to which I call your attention is Anatomy, the study of the organization of the human body, which is the basis of the pyramid of Medical Education. According to the strength and extent with which this only sure foundation is laid, will be the firmness and durability of the entire superstructure. He that crects the fabric of Medical Practice upon any other basis, "builds his house upon the sands." But as I cannot detain you here with a disquisition on the inestimable value of Anatomy to the practitioner, or its intimate connection with the other branches of medical study, I take the liberty of referring those of you who may wish fer a further exposition of the subject, to an Introductory Lecture delivered in Philadelphia in November 1840, in which I endeavered to set forth the importance of this great subject, arising from its relations to general science as well as from its particular bearing upon our professional pursuits.

We teach here, as our time and abilities will allow, those subdivisions of this science, called General, Special and Surgical Anatomy. The first, General Anatomy or Histology, has for its special object the Anatomy of Textures, under which is comprised a knowledge not only of the proper elements of the organization, but likewise of the proportions in which they combine to form the various tissues entering into the composition of the several organs and systems. For our knowledge of this branch of science we are mainly indebted to BICHAT, who may indeed, be said to have created it. Removed, at the early age of a little over thirty, frem the pursuit of a career of research which was original in the extreme, he yet lived long enough to throw the light of his brilliant genius upon a new developement of the science that he loved, and, with an unrivalled power of analysis, to demonstrate and generalize all the different tissues which are now recognized as constituents of the human system. What heightens the claim of his great werk on General Anatomy, to be considered one of the highest achievments of human intellect and industry, is the almost incredible account that he began and finished it within one year, working by night and sending the copy in the morning to the printer without correction. I need not apologize, Gentlemen, for thus awelling, for a moment upon the name of the distinguished Frenchman, who must always rank among the noblest of the Martyrs of science. Special or Descriptive Anatomy investigates the form, magnitude, weight, situations and connections of the different organs forming the system. In Surgical or Topographical Anatomy, the body is divided into regions, and the various tissues and organs composing those regions, are examined in order to determine their importance in case of disease, accident or surgical operation; to estimate which, it is of course necessary to be well acquainted with the composition, size, shape and relative position

of the parts thus circumscribed.

A knowledge of this extensive science is to be obtained by the study of books, by attendance upon Lectures, and by the dissection of the dead body. As for the first of these, - you should select some approved treatise and make it the hand-book of your studies, and while you are making yourselves familiar with the arrangement of the matter and the details of the subject as taught in the text, you will find it necessary also to enlarge, and perhaps correct, your views, by collating it with that of other authois. Read, Gentlemen, as much as you please, so that you do it accurately, and lay up the results of your reading in your memory, but avoid as a bane, that loose and desultory reading which leaves no substantial possession as its fruit. You can obtain books enough, and of the best kind, in regard to the subject now under discussion; but in reading the clearest and simplest of them, you will find it necessary to employ all your acuteness in perceiving, all your comprehension of mind in embracing, and all your power of memory in retaining the various and complicated topics which will be presented to you. Without the faithful study of books your attendance upon lectures will be deprived of half its value. I would advise you, indeed, throughout the course, to read what the books have to say upon any given subject before attending the lecture, in order to prepare your mind to follow the Professor with ease; and to read again, upon the same topic, after the lecture in order to fix the impression which it may have made, ineffacebly, in your memory. In the rapidity of oral discussion some points will escape even the readiest mind and the most vigilant attention : but, the book will still lie open to you, and will wait for your continued scrutiny .-If you would be full of anatomical knowledge, read many books and read them well.

But experience has shown the great utility of oral Lectures in this, as in most other branches of Natural Science, and a great part of your Anatomical knowledge will be obtained in this way. The course I shall adopt in the consecutive Lectures will be, first, to demonstrate and explain the different tissues entering into the composition of the body, thus giving an outline view of General Anatomy. I shall then take up the skeleton, and exhibit the different parts and the manner in which they are connected by means of ligaments and cartilages; the muscular system will then be brought into view, after which will be demonstrated the viscera contained in the various cavities; and, finally, I shall treat of the circulating and nervous systems, which will complete our views of the second division of the Science, Special Anatomy. During the exposition of the vessels, nerves, and

viscera, I shall call your attention to the relative position of these parts and the contiguous bones and muscles, show the manner in which the principal regions are formed, and exhibit the contained parts in connection with their practical and surgical relations, thus attempting to teach you the third division of the Science, Surgical or Topographical Anatomy. Throughout the lectures the parts under discussion will be exposed in the recent subject. I shall also be greatly assisted in my demonstrations by the various plates, models, and preparations in our Anatomical Museum: And although it would be unbecoming to make promises in regard to what I shall do, there can be no impropriety in my assuring you that no labor of mine shall be wanting to give perspicuity to my teachings, and to facilitate your efforts in the acquirement of Anatomical knowledge. In the language of Dr. Win. Hunter, which expresses my determination in this respect so accurately that I cannot forbear to quote it, "I have always studied, and shall continue my endeavors, to employ the time that is given up to Anatomical studies as usefully to the students as I can possibly make it, and therefore, shall never aim at showing what I know, but endeavor to show and describe, as clearly as possible, what they ought to know. This plan rejects all declamation, all parade, all wrangling, all subtilty; to make a show, and to appear learned and ingenious in natural knowledge may flatter vanity; to know facts, to separate them from suppositions, to range and connect them, to make them plain to ordinary capacities, and, above all, to point out their useful applications, is, in my opinion, much more laudable, and shall be the object of my

But, Gentlemen, I have yet to call your attention to the principal source of Anatomical knowledge. Indispensable as books are, and instructive as Lectures may be made, you can never become, I will not say distinguished in the science; but even such Anatomists as you ought to be before you can safely be trusted with the lives and limbs of your fellow creatures, unless you superadd to those modes of study, the practical method of dissecting the dead body. It is said of John Hunter, the Father of British Surgery, that when Dr Physick was placed under his care, as a private pupil, he led the young student into his dissecting room, and pointing to some dead bodies, said, "These are the books from which the student will learn under my direction." And they are books, Gentlemen, which are not to be hastily examined, but rather to be made the subjects of your daily scrutiny and your nightly toil. I have never found it necessary to defend the practice of dissection. Its absolute necessity is plea enough for its use, notwithstanding the strong repugnance, founded in the best feelings of our nature, that must be overcome by most persons, before they can entirely reconcile themselves to it. I would not insult the intelligent community in which we dwell,

nor the good sense of the audience of students in this Hall, by harboring the supposition that either they or you cherish that unreasonable prejudice against dissection which exists only among the most ignorant classes of mankind. The religious veneration of a superstitious people for the remains of the departed-even of the lowest orders in society-prevented the ancient physicians from dissection, and thereby from bringing our science into philosophical system; but that time has gone by, and now, the Anatomist, instead of being looked upon as the despoiler of the grave, is viewed as its enemy and almost conqueror. The reproach, however, is generally cast upon the inland schools of this country, either that the students cannot be induced to dissect, or that material sufficient for the purpose cannot be furnished by such institutions. The former objection cannot lie, I am sure, against the students before me; the latter, we are determined shall not hold good against ourselves. I am happy to say that we have made such arrangements as enable us to promise, we think with confidence, that we shall always have on hand a sufficient supply of material to enable every member of the class to pursue cadaveric investigations. If you fail, therefore, Gentlemen, to become sufficiently versed in Anatomy to warrant us in conferring upon you the diploma of this College, the fault will be your own, not ours. Do not understand me to say that you must become perfect Anatomists before you can graduate here; so vidiculous an assertion would destroy itself by its very absurdity. I only mean to declare our purpose to discharge our duty to the community, by taking care that the opportunities of study which are here afforded to you shall be fully and faithfully improved.

While it is the business of the Anatomist to exhibit the structure and texture of the human body, the developement of its vital phenomena and their laws, is the object of Physiology. Even in the restricted sense in which the term is used in the Medical Schools, as denoting the Science which investigates the functions of the system in a healthy state, you will find it one of the most interesting and useful branches of study which will here engage your attention. Since the time of Haller, Physiology, which was formerly a tissue of empty speculations, a mass of error and fiction, has assumed a more scientific form, and it now presents us with a beautiful array of facts and not a few well-established principles. From the close connection of the living phenomena with the organs themselves, you will find that this more philosophical developement of Physiology has gone pari passu with its association with Anatomy, and that the best observers of the functions have first made themselves thoroughly familiar with the organization. You cannot fail to be attracted by a Science in itself so fascinating, and which has been illustrated by the labors of a Haller, a Richerand, a Majendie, a Bichat, and a Broussias. The useful applications of Physiology will be fully unfolded to you by my colleague whose duty it is to teach this beautiful department.

Founded upon Anatomy and Physiology, is Pathology, the science which examines the nature, symptoms, causes, variations and results of disease. To name the objects of this branch of knowledge is to state its importance. Dr. John Bell calls it "the complement of all the other medical studies, which are ranged around it, as a common centre, at unequal distances;" and declares that "no branch of medicine requires more industry in research, patience in investigation, nicety of discrimination, and enlarged views of mankind." The growth of Pathology has been wonderfully rapid of late years. The external signs of disease, indeed, did not escape the observation of the old physicians; but without the aid of Morbid Anatomy, even a Galen or a Sydenham could know nothing of organic changes. Here the greatest triumphs of our Science are to be found. The skilful physician no longer makes up an inaccurate diagnosis of diseases of the chest from external indications, but by means of auscultation and percussion decides, with almost mathematical precision, upon the organ that is affected, and even upon the extent of the ravages which disease has committed. The class of last Spring will remember the indefatigable zeal with which Professor Mitchell demonstrated to the groups of them, who, by his appointment, visited his rooms after lectures, the manner of employing these comparatively new means of investigation, for which we are indebted to the French, our masters in medicine, as in almost every other branch of Science. In the Course of Lectures, the Professor will exhibit to you fully, not only the principles of Pathology, but, also, the best modes of investigating disease in general.

Chemistry makes us acquainted with the composition of bodies, and with the laws by which they act on each other. Hardly known as a Science a century ago, it now presents us with an accurate analysis of a vast number of inorganic bodies, and reyeals, also, many of the mysteries of organized matter, both in animal and vegetable substances. Important as this Science is to the Agriculturist and the Manufacturer, its noblest applications are to be found in Medicine. Whether occupied in the investigation of gases, salts, and metals; or in the analysis of plants and their products; or in the study of animal substances, the Chemist is contributing to the enlargement and perfection of our Science. He shows us the nature and properties of medicines, and thus assists our Materia Medica; he exhibits to us many principles of the food which we eat and the atmosphere which we breathe, whose influence in sicknes and health is almost incalculable, and thus improves our Hygienic knowledge; he even helps us in examining the power of Life and the effects of disease upon the animal organization, and thus enlarges our Physiology and Pathology. You will, therefore, study this extensive Science, Gentlemen, not merely because of the brilliant light

which it throws upon the operations of nature, but also, and especially, because of its practical applications in your future profession. Pharmacy or Pharmacology, which explains the physical and chemical properties of medicines, and the best modes of combining them to produce the desired results, is here taught in connection with Chemistry. To illustrate both subjects, your Professor is provided with an ample supply of specimens and apparatus. From his intimate acquaintance with these subjects, acquired during long experience in teaching them, I have no doubt the consecutive lectures will not only be highly interesting, but practically useful to you.

Materia Medica teaches the knowledge of the various medicinal substances, animal, vegetable, and mineral, with the natural characters and properties, as well as their application to practice. Although its scientific character cannot be rated as high as that of the other branches of study to which I have called your attention, because the proper modes of investigation have been less applied to this, than to any of them, its practical importance cannot be too strongly stated. Empiricism, indeed, requires no extensive knowledge of the Materia Medica; the panacea supersedes any such necessity. The routine practitioner, too, may be satisfied with knowing that mercury is an alterative and opium a narcotic. But the man who professes to found his medical practice upon scientific principles, and yet administers remedics with whose properties he is unacquainted, or fails to administer the proper ones for want of such acquaintance, is a quack in spite of diplomas. You will lack no necessary helps here, Gentlemen; -a thorough Course of Lectures, illustrated by a large collection of specimens of medicinal substances, will enable you to acquire a sufficiently copious and accurate knowledge of this important branch of study. The same Professor will also instruct you in the doctrines of Therapeutics, which teaches the principles that should govern us in the administration of remedies, and the indications fulfilled by the different articles of the Materia Medica. To cure disease is the object of all our studies; and although this branch of our science is the one which has been the most disgraced by vague theories and unsubstantial speculations, you will find that better views are now prevailing; and that with a sound pathology, a close examination of symptoms, and a tolerably distinct knowledge of medicinal agents, the therapcutics of this day are far removed from the arbitrary systems which formerly took the place of observation and experiment. The lectures on the two branches just alluded to, you will find eminently instructive.

Obstetrics or Midwifery, is that department of our profession which teaches the manner of treating the diseases incident to the female during her pregnancy, parturition and purperal state.—The true object of our studies here ought to be, to determine when Nature, unable alone to accomplish the delivery without injury to the mother or her child, needs the assistance of Art.—In this Institution the Science is divided into Operative and Practical Obstetrics. Professor Mitchell will teach the first

branch, and during his course will fully explain to you the circumstances of natural labor, the method of operating to accomplish delivery should any mal-position of the child occur, and all the detail of treatment required by a parturient woman; illustrating the different subjects referred to in the lectures by the manikin, plates and preparations. Practical Obstetrics treats both of the diseases of the parturient patient and those of the newly born child. This branch is under the charge of Professor Perkins, whose well-known practical skill, and accurate acquaintance with the whole subject, will enable him to afford you the best and most useful information in regard to them.

I now pass to the consideration of Surgery, one of the noblest studies to which the human mind can be directed. When it is stated to you that the object of Surgery is to obviate the effect of injuries done to the human body, whether occasioned by internal or external causes, you will have some idea of the variety of its applications, and of the absurdity of the notion which has obtained to some extent, that its practice requires only a limited knowledge of Medicine. The principle of division of labor, valuable as it is, becomes destructive, when it is applied to the separation of Surgery from Medicine. In England the two branches of practice are disassociated, so that, by law, the physician is not required to know anything of Surgery, nor the surgeon to understand the treatment of any other than surgical diseases. It is well for us that no such distinction exists in this country. The Surgeon ought to be the best of Physicians .-Indeed, every demand for the use of the knife is an implication of the poverty of our science, whose highest aim should be to cure disease of every form with the least possible injury to the organization. I cannot exhibit to you the true characteristics of a good surgeon better than in the language of the lamented Godman, in a note to Coster's Manual of Surgical Operations. "The difference between a surgeon and a mere operator, may be more thoroughly appreciated by contrasting them :- the surgeon inquires into the causes and removes the consequences of constitutional or local disease - the operator inquires into the willingness of his patient to submit, and resorts to the knife. The surgeon relies on the restoration of the healthy actions by regimen and medicine-the operator relies on himself, and cuts off the diseased parts. The surgeon reflecting on the comfort and feelings of his patient, uniformly endeavors to save him from pain and deformity-the operator considers his own immediate advantage, and the notoriety he may acquire, regardless of all other considerations. The surgeon reluctantly decides on the employment of instruments-the operator delays no longer than to give his knife a keen edge. The surgeon is governed by the principles of medicine-the operator, most generally by the principles of interest: one is distinguished by the numbers he has saved from mutilation and restored to usefulness-the other by the number

of cripples he has successfully made. The surgeon is an honor to his profession and a benefactor to his fellow creatures—the mere operator renders the profession odious, and is one of the greatest curses to which mankind, among their manifold miseries are exposed."

But, gentlemen, in the present state of medical science, the use of the knife is sometimes indispensible. I trust therefore, that you will apply yourselves closely to this important subject, and endeavor to prepare yourselves for those scenes of trial to which, in all probability, you must more or less frequently be introduced in the course of your practice. My colleague, the Professor in this department, divides his lectures into two parts, in the first of which the principles of surgery are developed, while the second is given up to operative surgery, where, "in addition to the usual demonstrations on the subject of the operations both of major and minor surgery, and the dislocations and fractures made and reduced in presence of the class, there will be further illustrations by easts, and a complete set of oil colored paintings the size of life, representing the various surgical diseases, and the respective operations for their removal."*

The Practice of Medicine teaches the application of principles derived from the various branches of study to which your attention has been called, at the bedside of the sick. In this department, your intellectual powers will be more strongly tasked, perhaps, than in any other, for it is furnished with few helps in the form of ocular demonstration. It will not appeal to your eyes but to your understanding. Manual dexterity will avail nothing here. But whatever capacity for observation, memory or reflection you may possess will be constantly and thoroughly tasked. The Professor of Theory and Practice will not fail to set before you in the strongest light the importance of his department, and I am sure that he will develope its principles in the true philosophical spirit, and with the utmost clearness and precision.

Opthalmology, as here taught, is a much more extensive science than is implied in its title, embracing not merely the Anatomy of the eye, but also its Physiology and Pathology, medical and surgical. During the lectures, the structure and functions of the organ will be fully demonstrated by means of recent disseetions, preparations, models and diagrams. In the surgical part of the course, the various operations will first be performed by the Professor, upon the eye of some inferior animal; you will then have the opportunity of repeating the operation in presence of the teacher, thus acquiring that practical skill which is so often called for in the performance of the delicate operations required in opthalmic diseases. In addition to these demonstrations, many operations upon living patients were performed during last session in presence of the class; and we have every rea-* Annual Announcement.

son to expect that during the present term the number of such operations will be much increased. It is worthy of remark that this College is the only one in the United States where this essential branch of science is taught by a distinct Professor.

The last subject to which I shall call your attention in this relation is Medical Jurisprudence, which is said by Dr. Beck to be that "science which applies the principles and practice of the different branches of medicine to the elucidation of difficult questions in Courts of Justice." Great contempt has been brought upon our profession by the apathy with which, until lately, this important subject has been regarded. Consider its bearings for a moment, and you will see the folly of neglecting it. The issue of an important trial depends upon the question whether or not a certain individual is of sound mind. Who but the physician is called upon to decide the question? A rapeis charged—the medical man is placed in the box and must settle the point as to the guilt or innocence of the prisoner at the bar. Murder is suspected in another case, and the causes of death, or the effects of wounds or poisons must be fully laid open by the physician. a word, cases are continually occurring in which the lives of innocent men, the property of supposed lunatics, or the character of individuals before of good repute, lie absolutely at the mercy of the medical practitioner. Who can measure his guilt, if injustice be done on account of his wilful ignorance? Who will sympathize with his shame, when that ignorance is exposed in the crowded court-room by an acute lawyer? Who will envy his feelings, when, after the verdict is rendered, he finds that the guilty have escaped or the innocent been punished, through his stupidity? To this ordcal, gentlemen, you will all be liable .-I trust, for the honor of the profession, and for the sake of your own good name, that you will prepare yourselves for it by a faithful improvement of the opportunities here offered to you by the lectures of a competent Professor devoted to the single subject of Medical Jurisprudence.

From the brief outline which I have now given yon, gentlemen, you can form some idea of the extent and variety of the studies requisite to prepare you properly to discharge the duties of the honorable profession to which you are looking forward.—Need I say, that, in view of these extensive studies, you must apply yourselves diligently to the acquisition of knowledge during your stay here? Need I now tell you that there is no royal road to medical skill? Be assured that no acuteness of perception, no strength of understanding, nay, no brilliancy of genius, will enable you to dispense in the course of your future practice, with a knowledge of the branches of science which I have enumerated in your hearing. The possession of these great gifts, if it disposes you to neglect your studies, will prove a curse to you instead of a blessing. The physician must be a man of knowl-

edge as well as of talent. I know that you may answer every exhortation of this sort, by adducing examples of men within your own knowledge who have acquired practice and wealth without any proper preparation for the profession. So, gentlemen, have panacea mongers and pill-venders of all classes succeeded in amassing wealth by imposture. There is abundance of quackery in the profession as well as out of it; and it is hard to say which is the most pernicious. The man who attempts to cure diseases generally without such a basis of sound medical knowledge as has been named to you, is a quack, as I have already said, in spite of diplomas. You may find these titled ignorami hanging on to the skirts of our noble calling and disgracing it by their blundering ignorance, in every village, town and eity in the land. From the culpable negligence of Medical Examiners, or perhaps more frequently, from the avarice of Medical Professors in Colleges, in whose eyes the fees of graduation were of more importance than the worth and dignity of the profession, many such unqualified men have been sent forth into the world, with an M. D. tacked to their names, licensed to practice physic without skill, -or more truly, licensed to kill their fellow creatures with impunity.

Shall this class of men continue among us? Shall the medical character never assume its proper elevation in this country? It is for you, gentlemen, and such as you, to answer these questions. Apply all your energy and industry to study now, and you may go forth from these Halls with a rightful title to the respect of your fellow men; prepared by your own skillful and successful practice, to vindicate the scientific claims of our Art, and to elevate the reputation of the Profession which you have chosen.

Do not understand me, however, to present the difficulties of our study as discouragements to any of you. There are no deep mysteries in medical practice requiring supernatural skill to unravel them. You will never be expected to work magic. Any mind of ordinary capacity may embrace the range of medical science, by diligent perseverence in study, to a sufficient extent for all practical purposes. We do not even expect you to obtain a full knowledge of all the departments included in the succeeding lectures; to study any one of them completely, would be enough to engross your whole attention for a long period. What we ask is, that you form habits of thorough study, and acquaint yourselves with the elements of each division of the science, by storing up its leading facts and fixing in your minds, firmly and forever, the principles that will be unfolded to you as essential for your future professional course. This will be within the reach of any one of you who exerts his powers faithfully; it can be accomplished by no one who does not.

Recollect also, gentlemen, that your course here will be but the commencement of your studies. Your medical education must end only with your active life. Not a few, however, absurdly enough, seem to suppose that books and thought are to be laid aside as soon as actual practice is begun, and some even take pride in the notion that they do not need to study. A foolish distinction is sometimes made, between physicians who read and those who rely upon their own observation; as if it were impossible for a man to avail himself of the resources of ethers, and to keep his own eyes open besides; as if no experience were of any value but his own. "The eye sees in any object only what the eye brings the means of sceing;" and the well-read practitioner perceives, at one glance, what the microscope would hardly exhibit to his unlearned neighbor. But why need I dwell in such truisms? We lose all patience in thinking of the lazy or self-confidant Doctors whose "studies were finished," when they left college with a parchment in their pockets, and to whom the progress of Medical Science has since been a scaled book. If you have no higher ambition than to enter into this class of privileged dunces, I pray you to shut up your books and go home; you have mistaken your calling. But you have a nobler ambition. In the fervor of your youthful aspirations you look forward to eminence, and you are resolved that no labor of yours shall be wanting to obtain it; you look forward to long years of patient thought and untiring observation; you even dream that the boundaries of Science shall be enlarged through your means, and that you shall leave the profession higher than you found it. Let not those young dreams expire. The earliest purposes are generally the noblest, and not until their impulses are forgotten, can the love of ease, or the sordid desire for gain, obtain complete mastery over you. The field before you is wide, and its toils are abundant; but its honors are ample. Enter it, Gentlemen, with an earnest purpose to "sow your seed in the morning-and in the evening not to withhold your hands;" labor in it, like zealous cultivators, with ceaseless auxiety and unfailing industry; and as surely as the laws of God are changeless, will your harvest be rich and satisfying. Rich, even in the lesser rewards of wealth and honor; richer still, in the steadfast satisfaction of your own conscience; richest of all, in the approving smile of that Great Being whose favor is better than life-whose frown is destruction.

I shall now close this address, by answering a question which has often been propounded to me since I became a resident of this State, viz: whether it is not better, on the whole, for every medical student to attend lectures in one of the large cities? I have had some opportunities of observation in regard to this matter, and shall now endeavor to give you the results of that observation, fairly and candidly.

Philadelphia is the metropolis of Medical Science in this country; in no other city have medical schools ever obtained so high a rank, or kept up a healthy existence for any length of time.— In that city, where most of my life has been spent, I was for a number of years a practitioner and teacher of medicine, and know the condition of its schools, I believe, thoroughly. The

best of those schools, beyond all doubt, is the University of Pennsylvania, whose Courses are attended by about four hundred students every year, whose fame is the oldest, and by far the most extended, of all the American Colleges; whose teachers have been, during many years, the oracles of medical wisdom for this nation: and whose alumni, scattered through every State in the Union, are generally the best educated and most respected medical men among us. In stating to you, therefore, the advantages of this ancient school, I take the strongest case that can be presented. I should say to you at once, Gentlemen, if you must go to a city school, go to the city of Philadelphia and to the University of Pennsylvania. There you will find seven accomplished Professors, lecturing on Anatomy, Surgery, Institutes of Medicine, Chemistry, Materia Medica, Obstetrics, and Practice of Medicine, besides the Demonstrator, who is one of the best teachers of Practical Anatomy to be found. During the Course, which lasts from the first Monday in November to the middle of March, you will hear from the lips of these distinguished men about eighty lectures each in Anatomy, Surgery, Practice, Institutes of Mcdicine and Chemistry; and about fifty lectures each in Materia Medica and Obstetrics. You will find these lectures delivered in a large and commodious edifice-affording every accommodation for the business of instruction, and illustrated by the most extensive collections and apparatus in Anatomy, Surgery, Obstetrics, Materia Medica and Chemistry, which the country affords. You will have every facility for the study of Practical Anatomy-subjects in abundance, and constant instruction. You will find better opportunities of Clinical instruction. and for the observation of Hospital Medical and Surgical practice than are afforded any where else. And to all these, Gentlemen, the opportunities for improvement in general literature and science, by means of libraries, public institutions and lectures, in respect to which Philadelphia stands at the head of the cities of the New World, and you will have, I think, a complete idea of the advantages afforded to the medical student at the University of Pennsylvania.

And let us compare these advantages with those of a well organized country School. I may, without presumption, take our own School as the subject of this comparison, for, after all, that is intended to be the point of my remarks; and I am sure that as to completeness of organization for the business of medical instruction, we have no competition to fear out of the city of Philadelphia. As to the lectures, then, without making any unbecoming comparison of the members of our Faculty with those of any other school, I have no doubt that you will find each of them fully qualified to teach the branch to which he is here appointed. This college offers you eight Courses of Lectures by distinct Professors, who will spare no pains or labor to do justice to their several subjects. Observe, too, that these lectures will cover all-

the ground that can be advantageously cultivated in a preparatory course of education, which is all that is attempted in the courses at Philadelphia. To our buildings, apparatus, and collections, your attention has already been directed; they speak for themselves. As to facilities of Clinical instruction we do not pretend to compare with Philadelphia, where there are extensive dispensaries and hospitals, of which we are destitute. But we expect to show you, almost daily, one or more medical or surgical cases, enough, indeed, to occupy all the attention you will have to devote to the subject; and from arrangements now in contemplation, we think it highly probable that, before long, we shall have an Infirmary connected with the Institution. As for Practical Anatomy, which is generally neglected in country schools, we do not need to fear comparison. We shall afford you every necessary illustration from preparations, and leave you at no loss for material for dissection. So much, then, forthe means of instruction and improvement. The practical question, after all, in regard to these means, is. how far can the student, in the limited period of his attendance at College, avail himself advantageously of them. You may surround him, indeed, with all the lecture rooms, hospitals, and museums of the city of Paris; but if he has not time to employ them all, their very profusion of appliances and means will distract his attention, and prevent his improvement. I think it may be safely stated that the mass of students who attend but two courses of lectures in Philadelphia, appropriate to themselves no greater amount of instruction and assistance than is afforded to every student of this College.

But there are other, and very material, grounds in regard to which this comparison must be stated. And first, let me here notice the expenses of a student at the University of Pennsylvania. The fees paid before the diploma is received, including those of the Demonstrator of Anatomy, whose ticket no one who desires to secure either a good character or a sound education will omit to take, amount to three hundred and thirty-five dollars. Most pupils also receive, during one session at least, private instruction from one or more physicians, the average cost of which is thirty-five dollars. The expense of boarding for the two sessions will average about one hundred and sixty dollars. There are few students who do not spend money at the different places of public resort and amusement; the amount, of course, varies with the habits of the student, but a very low estimate would make the average at least one hundred dollars. Add these sums together and you have a total of six hundred and thirty dollars, exclusive of the extra cost of clothing in the city, which is no inconsiderable item, as the habit of expense in this particular, is almost universal with the students.

Look now at the expenses of attending this School. The fees

for two courses of lectures, and for graduation, amount to one hundred and thirty-six dollars; the highest cost of boarding for the two sessions is sixty-three dollars; and, allowing thirty dollars for outlays in amusement, &c. which is a large estimate in view of the absence of those places of attractive resort which allure so many in the city, we have a total of two hundred and twenty-nine dollars, leaving a balance in favor of Castleton of over four hundred dollars! It might be supposed that the cost of dissection would be greater here than in Philadelphia, but as we make no charge for dissecting ticket, use of rooms, or service, it is actually less. In these days of retrenchment and reform such a difference in the cost of education as has just been presented to you, is worth considering.

I need hardly say to you that in view of the physical health of the student, a residence in so pleasant a village as this, is far more desirable than in the confined streets of a crowded city .--To one who has not been accustomed to a city life, the change from the pure air of the country is, almost of necessity, injurious; and besides that, all the habits of society, foreign as they are to his accustomed mode of living, when combined with close attention to study and neglect of active exercise, tend to impair the general health. I can say from my own knowledge, that many young men from the country find their health so much affected by these causes, that they are obliged to abandon their studies and return home before the completion of their course; while others, more persevering, but perhaps more unfortunate, carry away a diploma, indeed, but with it also an enfectled stomach, shattered nerves, or a disorganized liver, which either incapacitate them for the duties of the profession entirely, or make the rest of life a miserable burden. No such causes of disease operate here. In the quiet society of our village you will find no unnatural excitement. In our simple, frugal mode of living you will not be tempted to excess and led on to disease. In your daily walks, instead of inhaling an atmosphere burdened with the countless noxious vapors that steam up from the streets and alleys, the wharves and gin-shops, the factories and slaughterhouses of the crowded city, every breeze that fans your check will bring health and vigor on its wings. Even while you are devoting yourselves untiringly to the pursuit of knowledge, if you will combine daily exercise in the open air, to which everything invites you, with habits of great regularity, from which you will have no temptations to deviate, you may enjoy as strong health here as amid the leisure or the toils of home; and then you may apply yourselves to study with all your energy, succeeding, as men only can succeed, who enjoy the mens sana in corpore sano.

But the strongest argument against a few years' residence in the city for the purpose of education is to be found in the dangers to which the *moral* health of the student must be exposed. I say a few years' residence, - for as they who are brought up in the city are less likely to suffer in their physical health from its causes of disease, so also are they less likely to be infected by the evil moral atmosphere to whose miasmata they have been accustomed from their childhood. Without any sentimentalism, Gentlemen, but in all honesty of heart, and with a full consciousness that what my own eyes have seen will confirm all my assertions, do I declare to you, that no young man goes from a quiet country or village home, where he has been reared in the midst of virtues and religious associations, to study a profession in the city, without running the fearful risk of moral debasement. Not that all such become depraved; there are many bright examples to the contrary; but the hazard is absolutely fearful in every case. Unless the heart is fortified by a strong religious faith, the only armor that is proof against temptation, the chances are two to one that it will be pierced through and through with evil; that its foundations of feeling will be corrupted, its pure impulses destroyed, its habits of virtue broken up, and its unconsciousness of sin changed into a bitter knowledge of that evil tree and its deadly fruits.-I recollect three young men out of the class which attended lectures with me nearly twenty years ago, who had all been carefully brought up. Entering upon their course with good principles and habits, the results of their moral education, their attention to study and their exemplary conduct, for the first part of the session were worthy of all praise. But after a while the poison began to work. The attractions of vice became too strong for them; evils, at first hideous, by degrees grew tolerable,-and, at last, in the fatal progress downwards, altogether fascinating; places of resort, at first shunned as lurking places of mischief, then visited occasionally, became finally, habitual haunts trodden with willing feet. Their studies were neglected; their habits grew more and more irregular; midnight found them waking in revelry, and the morning sun shone in upon them, lying, with aching heads and fevered veins, upon their sluggard beds. One short winter was enough to change them from modest, virtuous young men, into reckless and intemperate profligates. I have watched their course since that fatal winter. The sun of one of them has gone down in gloom. The others are yet alive, but, worse than dead, the bond-slaves of intemperence. These are no fancy sketches, Gentlemen, nor are they solitary instances. Alas! there are but too many such. And how can it be otherwise, when our great cities, though the homes of art and refinement, and even the scenes of stronger religious zeal and effort, than are to be found elsewhere, are yet the centres of vice, the abodes of all forms of depravity, and the theatres whereon organized and disciplined vice contends constantly with virtue and goodness. Tacitus long ago called Rome "the city wherein all vile and shameful things flow together from all sides and flourish;" and there would be little injustice in ap-

plying his remarks to every great city of the present day. Compare now, in this moral aspect, the situation of the inexperienced student in such a city and in a quiet country town like this.-There, many forms of vice prevail, which are here entirely unknown. There he will find, not merely associates in every kind of wickedness, but tempters ready, at every corner of the streets to allure him to destruction; here, the stamp of public reprobation is set upon all such characters; and low practices, if indulged at all, must be indulged in secret. There Art lends her aid to adorn Vice in attractive garbs of beauty. Painting and Sculpture unite for her decoration. Music waits upon her steps. She walks forth openly, in the broad sun-light, flaunting her gay draperies before the eyes of the unwary, and dazzling them with her loveliness. She exhibits herself daintily by candle-light, amid throngs of willing worshippers, who gather garlands from all the fields of art, literature and science. to cast them at her feet; and with whose dovotion it is almost impossible not to sympathize. Here, all this fictitious splendor is unknown; and vice, if loved at all, must be loved forher own sake, in spite of her naked deformity. There, the wretched devotee of sin may mingle in society unmarked may even courted; and in the midst of thousands like himself, find the power of public opinion an ally, instead of an antagonist; here that power repels him from all association with mankind, and drives him back, like a leper, to his own den of solitary infamy. The poet of truth and nature, Cowper, said long ago,

"God made the country, and man made the town. What wonder then that health and victue, gifts That can alone make sweet the bitter draight. That the first of the total that the history and the same and

Where, then, will the young man's feet be least like'y to go astray from the paths of virtue? Where is it most probable that the lessons of virtue imprinted upon the young heart by the pious care of parents will be effaced? It requires but little knowledge of human nature to answer, that the parent's counsels will be more likely to abide in the heart, and to work out their mission in the virtuous conduct of after life, if the young man spends that most perilous portion of his age, the period of professional education, in the comparatively pure atmosphere that will surround him here, than in the midst of the strongest forms of temptation.

Observe, Gentlemen, that in this comparison, I have referred to the city of Philadelphia; simply because it is the emporium of medical science, and not because its moral character is worse than that of New York or any other of our great cities. On the contrary it has always maintained a distinguished reputation for morality and good order; its inhabitants are generally a peace-loving and law-observing people; and its many institutions of charity, in regard to the number and excellence of which it stands unrivalled, prove the existence of a large amount of sound virtue and expansive benevolence in its population. But, with all its excellencies, it is a great city; and, as such, the picture of its vices and temptations, which has been drawn for you, is not overcharged. I could not overcharge it if I would; certainly, in regard to my native city, I would not if I could. It is the best of our great cities, and therefore, my argument in favor of a country residence should be the more powerful and influential.

In the remarks already made, Gentlemen, the value of moral character has been fully implied. You will not deem it impertinent for me, in conclusion, to make a more direct assertion of its importance to you, in view of your future profession. The reproach has long been cast upon medical men, that, as a body, they are irreligious. Without stopping to inquire into the justice of this imputation, it can be affirmed most earnestly, that it ought not to be just. The Physician should rank next, in purity and dignity of character, to the Minister of God; as, certainly, next to that high office whose heavenly calling it is to heal the moral maladies of man's nature, in importance and usefulness to man's kind, must be estimated the calling of the Physician. man, then, is moral worth and religious strength more indispensible. Every day he must contemplate humanity in its decay and ruin. Almost every day he must see the dissolution of the earthly tabernacle of man's immortal spirit. Shall he stand among the affecting scenes of sickness and death which his eyes must look upon, as a mere mechanical, unsympathizing man of Science? Shall he not behold in the suffering form before him, a man and a brother? These questions will be answered according to the moral worth of the practitioner. If the high impulses of Virtue govern him, instead of finding his sympathies daily deadened by contact with suffering, he will exercise them constantly, and thus increase their power. If the light of Religion illuminate his own soul, he will be no feeble agent in conveying it to the heart of his suffering patient. And, as men of scient Gentlemen, you are bound to fix a high standard of moral ture, and to strive vigorously for its attainment. The cultiva of the intellect, apart from that of the heart, has been one greatest curses of our race. Make all your acquisitions, the fore, subservient to your moral culture, and your whole being will be developed in fair, harmonious proportion; live without a moral aim, and your highest accomplishments, considered with regard to the great objects of human life, will be but cphemeral and worthless. But I rejoice in the belief that this unnatural seperation of moral from intellectual power is not always to lastthat its day is almost over-and that with one of the greatest of modern poets, Wordsworth, we may indulge

"The animating hope that time may c me, When, strengthened, yet not dazzled, by the might Of their domini nover Nature gained, Men of all tanes shall exercise the same. In due proportien to their country's need; Learning, if ough late, that all true glory tests, All praise all safety, and all happiness, Upon the moral law. Egyptian Thebes, Tyre, by the margin of the sounding waves, Palmyra, central in the desert fell. And the arts died by which they had been raised. Call Archimedes from his buried tomb. Upon the plain of vanished Syracuse, And feelingly the sage shall make report. How insceure, how baseless in itself, Is the philosophy whose sway depends. On mere material instruments; how weak Those Arts and high inventions, if unpropped By Virtue."

CASTLETON MEDICAL COLLEGE.

FALL COURSE OF LECTURES.

The Fall Course of Lectures will be commenced on the first Thursday, 4th day of Augustnext, and be continued fourteen weeks.

FACULTY.

JAMES McCLINTOCK, M. D., President. Professor of General, Special and Surgical Anatomy.

JOSEPH PERKINS, M. D., Registrar.
Professor of Materia Medica, Therapeutics and Obstetrics.

FRANK H. HAMILTON, M. D.,
Professor of the Princip es and Practice of Surgery.

DAVID M. REESE, M. D., Professor of the Theory and Practice of Medicine.

CHAUNCEY I. MITCHELL, M. D., Professor of Physiology, General Pathology and Operative Obstetrics.

WILLIAM MATHER, M. D.,
Professor of Chemistry and Pharmacy.
WILLIAM C. WALLACE, M. D.,
Professor of Opthalmic Austomy and Surgery.
WILLIAM P. RUSSEL, M. D.,
Professor of Medical Jurisprudence.

EGBERT JAMIESON, M. D., Demonstrator of Anatomy.

Fees for the Course, \$50. Matriculating Fee, \$5. Fee for those who have attended two full Courses at other regular Medical Institutions, \$10. Graduation fee, \$16. Expense of Boarding, &c. \$1,50 to \$2,25 per week.

Castleton, April 5, 1842.